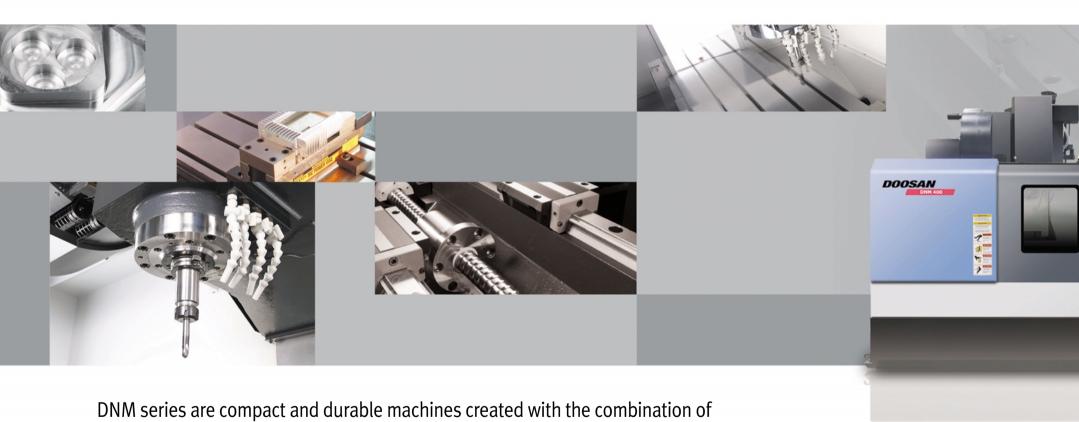


DNM Series



New series of vertical machining center High quality and efficiency derived from high productivity analysis



DNM series are compact and durable machines created with the combination of optimized function and increased rigidity to satisfy the quality goal of global class and cost-saving. The high productivity analysis is the major principle of the DNM series which have been designed with the user's needs in mind.

New series of Vertical machining center

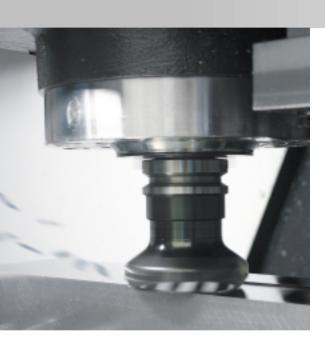
DNM Series

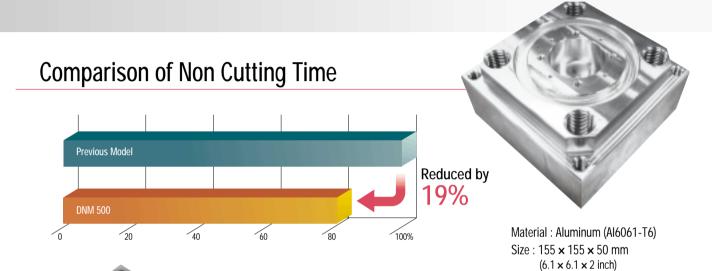


High productivity

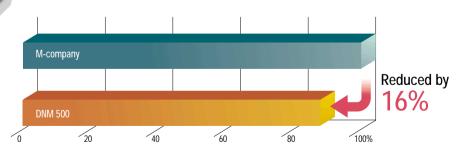
DNM series

Basic concept structure and operation ensure its capability to get the best results of productivity regardless of any conditions and complexities





Comparison of Cutting Time



No. of tools used: 14 tools

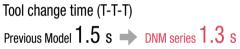
Material : Mold steel (HP4M)
Size : 270 × 270 × 100 mm
(10.6 × 10.6 × 3.9 inch)
No. of tools used : 5 tools

The results indicated in this catalog may not be obtained due to differences in cutting conditions.

Auto Tool Changer

Faster tool change time using cam increases productivity than previous model.





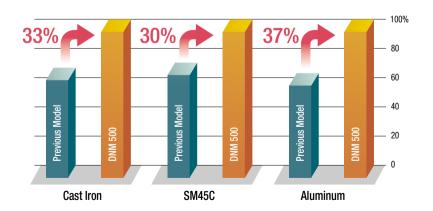
• This value is based on the motor on-off time and 60Hz.



Tool storage capacity 30 tools

40 tools on

Maximum Chip Removal



Rapid Traverse

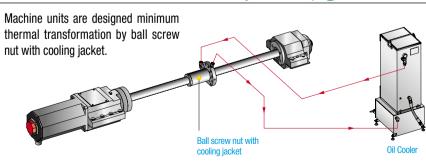


Linear motion guide ways and high speed servomotors apply high rapid axis movement. This reduces non-cutting time and machining time for greater productivity.



	DNM 400/500/650	DNM 400HS/500HS/650HS
X-axis m/min (ipm)	36 (1417.3)	48 (1889.8)
Y-axis m/min (ipm)	36 (1417.3)	48 (1889.8)
Z-axis m/min (ipm)	30 (1181.1)	48 (1889.8)

Minimum thermal transformation for high accuracy only DNM HS series



Machining Capacity (DNM 500)

(2.52 in.)

(2.52 in.)

Provides high-productivity and high-accuracy in a variety of machining operations

Face mill • ø80mm (3.15 in.) Face mill (6Z) 64 mm

Carbon steel (SM45C)

Fnd mill

Carbon steel (SM45C)

Machining rate

432 cm³/min (26.4 in³/min)

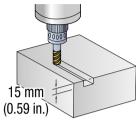
Spindle speed

1500 r/min

Feedrate

2700 mm/min (106.3 ipm)

• ø30mm (1.2 in.) Endmill (6Z)



Machining rate

36cm³/min (2.2 in³/min)

Spindle speed

222 r/min

Feedrate

80 mm/min (3.1 ipm)

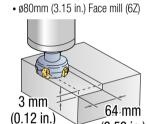
Face mill

(0.08 in)

Gray casting (GC25)

U-drill

Carbon steel (SM45C)



Machining rate

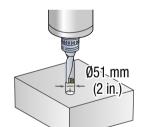
691 cm³/min (42.2 in³/min)

Spindle speed

1500 r/min

Feedrate

3600 mm/min (141.7 ipm)



Machining rate

172 cm³/min (10.5 in³/min)

Spindle speed

750 r/min

Feedrate

84 mm/min (3.3 ipm)

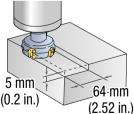
Face mill

Aluminum (AL6061)

Tap

Carbon steel (SM45C)





Machining rate

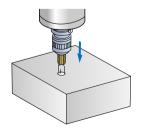
1785 cm³/min (109 in³/min)

Spindle speed

1500 r/min

Feedrate

5580 mm/min (219.7 ipm)



M30 x P3.5

Spindle speed

212 r/min

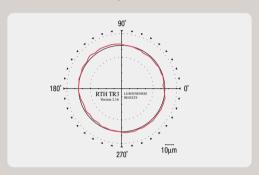
Feedrate

742 mm/min (29.2 ipm)

Machining Accuracy

For increased repeatability and reliability

Designed for exceptional high accuracy and minimized thermal displacement and vibration.



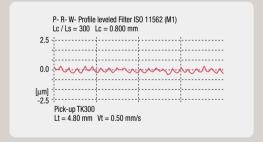
Roundness

5.40 um

Model: DNM 500

· Material : A7075F

• Tool: Endmill ø16mm (ø0.6 in.) (4 blades)



Roughness

 $\begin{array}{c} \text{Ra 0.12 } \mu\text{m} & \text{ • Spindle speed : 8000 r/min} \\ & \text{ • Feedrate : 1000 mm/min (39.4 ipm)} \end{array}$

• The results indicated in this catalog may not be obtained due to differences in environmental conditions during measurement and cutting conditions.

Easy Operation Package*

These DOOSAN software packages have been customized to provide user friendly functions.

Tool Table



ATC Recovery Help



G-code Help



Sensor Status Monitor



Work-Piece Set up Table Moving



Easy Parameter



M-code Help



Tool Load Monitor on



Operating Console



1. Swivelling Operating Console

An easy-to-use operation panel which can swivel from 0-90.

2. ATC operating button is arranged to Main Panel

Magazine : CW
Magazine : CCW

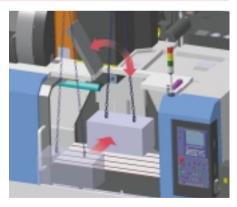
This can give much easier operation and maintenance for ATC.

3. Portable MPG

Portable MPG makes a workpiece setting easier for the operator.

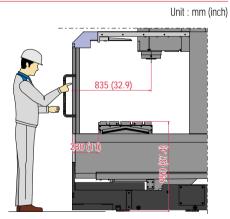


Top cover



Top cover can be opened to provide easy access for loading heavy workpieces to the center of the table.

Easy setup



DNM 500

^{*:} Only available in 10.4" Color TFT LCD

High Rigidity DNM 650 core machine

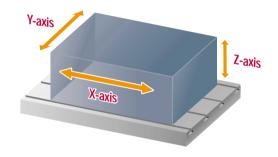
DNM series

Stable bed and column assembles are designed for high speed and heavy duty machining.

Compact Structure

Travel axes

Wide machining range select according to workpiece size



		DNM 400	DNM 500	DNM 650
X-axis	mm (inch)	762 (30.0)	1020 (40.2)	1270 (50.0)
Y-axis	mm (inch)	435 (17.1)	540 (21.3)	670 (26.4)
Z-axis	mm (inch)	510 (20.1)	510 (20.1)	625 (24.6)

The one piece bed is rigid and heavily ribbed Meehanite. These castings remain stable even under the heaviest cutting conditions. Fine grained Meehanite cast iron is used for its excellent vibration absorbing characteristics. The table is fully supported by the saddle in all positions and there is no table overhang. All axes have highly rigid and precise linear motion guideways.

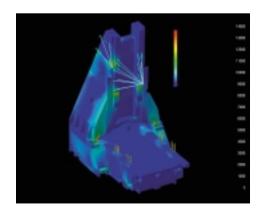
Static rigidity

The high rigidity structure of DNM has raised the static rigidity up by 30% more than previous model with no weak point through FEM analysis.

Dynamic rigidity

Improving the frequency response and the damping ability of vibration makes it possible to increase the high eigenfrequency 35% up on the previous model.

FEM analysis used to design a stable body. (FEM: Finite Element Method)





High Speed DNM series

High speed spindle of high quality and rigidity helps increase the efficiency and performance of the machine.

Spindle Head

Max. spindle speed

DNM 400/500/650

8000 r/min 12000 r/min opt DNM 400HS/500HS/650HS

15000 r/min 20000 r/min opt



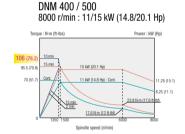
The spindle of DNM HS series is driven by the powerful built-in motor which has 22 kW power and 167 N·m torque.



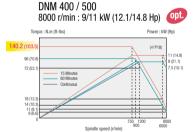
This enables the thermal growth of Y-axis to be reduced by more than 40% of previous model by pulling the air heated by belt out using the FAN with standard function.

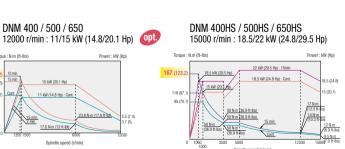


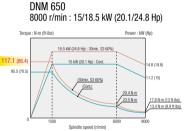
Spindle power-torque diagram

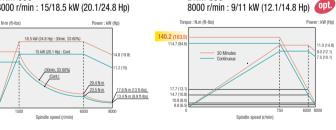


DNM 400 / 500 / 650

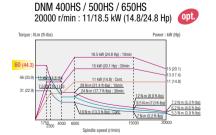








DNM 650



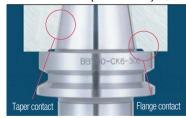
Oil cooler

The refrigerated spindle cooling system circulates cooling oil to maintain a constant temperature for high accuracy, regardless of the ambient temperature or cutting conditions.



- DNM HS series std.
- DNM series opt.

Dual contact (BIG PLUS) 👊



The dual contact system offers simultaneous dual contact between the machine spindle face and tool holder flange face.

Chip Disposal

DNM series

Chip treatment from the viewpoint of productivity improvement and environmental countermeasure is important. DNM series offer a variety of chip control equipment to provide enhanced accuracy and better chip removal capabilities.

Easy chip removal structure

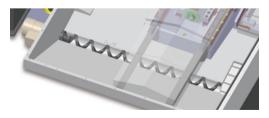
The completely enclosed DNM series guarantee the confinement of chips and coolant to the inside of the machining area. Chips fall into the removable forward mounted chip pan for easy disposal.

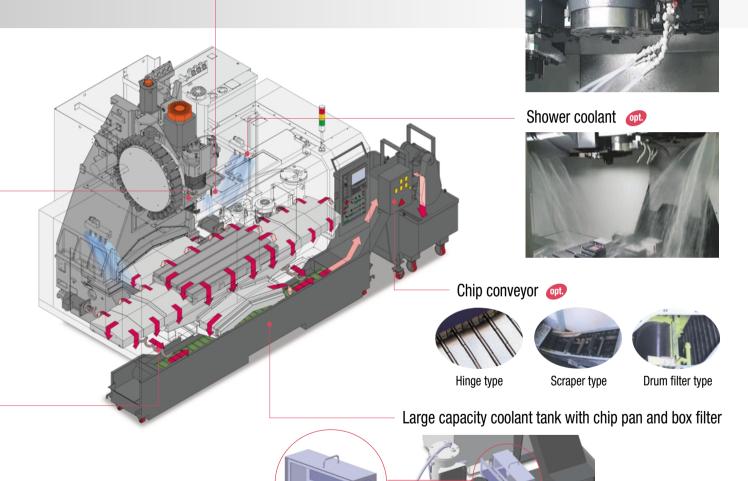
Through spindle coolant on

Middle pressure 1.96 Mpa (284.2 psi) High pressure 6.86 Mpa (994.7 psi)



Internal screw conveyor





Easy to discard chips piled up

Flood coolant

Coolant tank capacity DNM 400: 300L (79.3 gal) DNM 500: 380L (100.4 gal) DNM 650: 380L (100.4 gal)

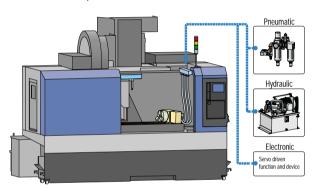
Optional Equipment

DNM series

Operator's convenience and operability

Interface for additional equipment

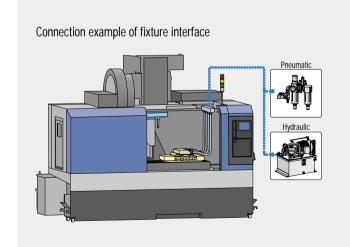
Connection example of additional 1 axis interface





Recommandable rotary table size : DNM 400/500 : \varnothing 250 mm (9.84 inch) DNM 650 : \varnothing 320 mm (12.6 inch)

Hydraulic power unit may be additionally necessary according to rotary table specifications.



Fixture check list (for hydraulic / pneumatic fixtures)

Pressure source

Hydraulic Pneumatic P/T P/T A/B

Number of ports

- ₱ 1pair (2-PT 3/8" port)
- **p** 2pair (4-PT 3/8" port)
- **p** 3pair (6-PT 3/8" port)

Hydraulic power unit

• Supply scope : F User Doosan

(Please check the below detail specification, if you want Doosan to supply.)

Use Doosan standard unit 24 L/min (6.3 gal/min) / 4.9 MPa (711 psi) F Special requirement

L/min (gal/min) at

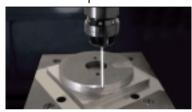
MPa (psi)

Contact Doosan for more information

Automatic tool length measurement



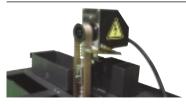
Automatic workpiece measurement



Minimum Quantity Lublication



Oil skimmer



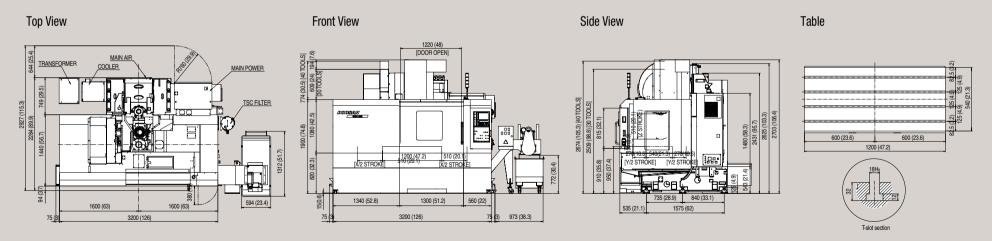
External Dimensions
Unit: mm (inch)

DNM 400

Top View Side View Table

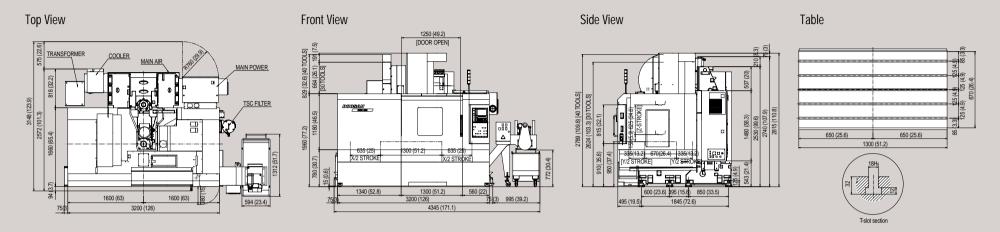
Front View Side View Table

DNM 500

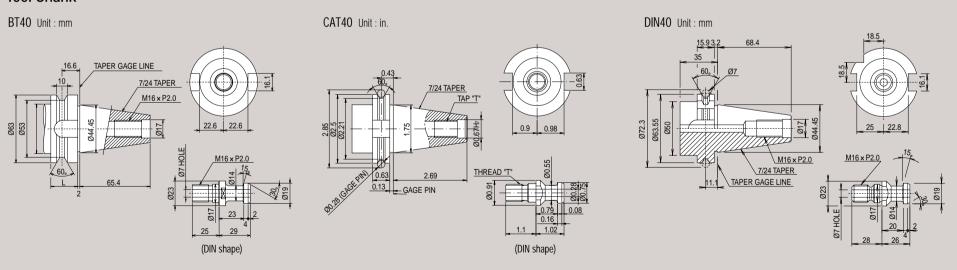


External Dimensions
Unit: mm (inch)

DNM 650



Tool Shank



Machine Specifications

	Features		DNM 400	DNM 500	DNM 650	DNM 400HS	DNM 500HS	DNM 650HS
	X-axis	mm (inch)	762 (30.0)	1020 (40.2)	1270 (50.0)	762 (30.0)	1020 (40.2)	1270 (50.0)
	Y-axis	mm (inch)	435 (17.1)	540 (21.3)	670 (26.4)	435 (17.1)	540 (21.3)	670 (26.4)
Travel	Z-axis	mm (inch)	510 (20.1)	625 (24.6)	510 ((20.1)	625 (24.6)
	Distance from spdl nose to table top	mm (inch)	150 - 660	(5.9 - 26.0)	150 - 775 (5.9 - 30.5)	150 - 660	(5.9 - 26.0)	150 - 775 (5.9 - 30.5)
	Distance from spdl center to column	mm (inch)	512 (20.2)	587 (23.1)	747 (29.4)	512 (20.2)	587 (23.1)	747 (29.4)
Table	Table size	mm (inch)	920 x 435 (36.2 x 17.1)	1200 x 540 (47.2 x 21.3)	1300 x 670 (51.2 x 26.4)	920 x 435 (36.2 x 17.1)	1200 x 540 (47.2 x 21.3)	1300 x 670 (51.2 x 26.4)
Table	Table loading capacity	kg (lb)	600 (1322.8)	800 (1763.7)	1000 (2204.6)	600 (1322.8)	800 (1763.7)	1000 (2204.6)
	Table surface		4-125	x 18H8	5-125 x 18H ₈	4-125	x 18H8	5-125 x 18H8
	Max. spindle speed	r/min		8000 (12000)			15000 {20000}	
Spindle	Spindle Taper				ISO #40 7	/24 Taper		
	Max. Torque	N·m (ft-lbf)	106 · (78.2 ·		117.1 {106} (86.4 {78.2})		167 (60) (123.2 (44.2))	
Feedrate	Rapid traverse rate (X / Y / Z)	m/min (ipm)	36 / 36 / 30 (1417.3 / 1417.3 / 1181.1)		48 / 48 / 48 (1889.8 / 1889.8 / 1889.8)		389.8)	
reeurate	Cutting feedrate	mm/min (ipm)		15000 (590.6)			24000 (944.9)	
	Type of tool shank				BT40, CAT	40, DIN40		
	Tool storage capacity	ea			cam 30 {	cam 40}		
	Max. tool diameter	mm (inch)			Ø80 (3.2) {	Ø76 (3.0)}		
Automatic	Max. tool diameter without adjacent tools	mm (inch)			Ø125	(4.9)		
tool changer	Max. tool length	mm (inch)			300 (11.8)		
	Max. tool weight	kg (lb)			8 (17	7.6)		
	Method of tool selection				memory	random		
	Tool change time (tool-to-tool)	S			1.	3		
	Tool change time (chip-to-chip)	S	3	.7	3.9	3.	.7	3.9
	Spindle motor (15 min)	kW (Hp)	15	(20)	18.5 (25)		22 (29.5) {18.5 (25)}	
Motor	Feed motor (X / Y / Z)	kW (Hp)	s) 1.8/1.8/2.5 4 3.0/3.0/4.0 4.0/			1.0 / 7.0 5.4 / 9.4)		
Power source	Electric power supply (Rated capacity)	kVA	3	0	40		50	
1 OWO1 Source	Compressed air supply	MPa (psi)			0.54 (78.3)		
Tank capacity	Coolant tank capacity	L (gal)	300 (79.3)	380 (100.4)	340 (89.8)	380	(100.4)
rank capacity	Lubrication tank capacity	L (gal)			1.4 (0.4)		
	Machine height	mm (inch)	2703 (106.4)	2703 (106.4)	2815 (110.8)	2703 (106.4)	2703 (106.4)	2815 (110.8)
Machine size	Machine dimension (L x W)	mm (inch)	2092 x 2615 (82.4 x 103)	2284 x 3350 (89.9 x 131.9)	2572 x 3350 (101.3 x 131.9)	2092 x 2615 (82.4 x 103)	2284 x 3350 (89.9 x 131.9)	2572 x 3350 (101.3 x 131.9)
	Machine weight	kg (lb)	5000 (11023.0)	6500 (14329.8)	8500 (18739.0)	5000 (11023.0)	6500 (14329.8)	8500 (18739.0)
Controller	NC system			DOOSAN-FANUC i serie	S		FANUC 32i-A	

[•] Design and specifications are subject to change without notice.

Standard Feature

- Assembly & operation tools
- Ball screw nut cooling system (HS series)
- · Coolant tank & chip pan
- · Door interlock for safety
- Flood coolant system
- Installation parts
- Internal screw conveyor
- Operator call lamp (red, yellow, green)
- Portable MPG
- Splash guard
- Work light
- X, Y, Z Absolute pulse coder

Optional Feature

- 10.4" Color TFT LCD**
- 4th axis preparation
- · Automatic power off
- Automatic tool length measurement
- Automatic workpiece measurement
- Cam ATC (40 tools)
- Chip conveyor & chip bucket
- EZ Guide i
- Minimum Quantity Lubrication
- Oil cooler & spindle head cooling system*
- Oil skimmer
- Shower coolant
- Test bar

Note : { } are optional.

Through spindle coolant system

* : Standard on 12000 r/min 15000 r/min 20000 r/min ** : Standard on HS series

[•] Doosan is not responsible for difference between the information in the catalogue and the actual machine.

NC Unit Specifications

DOOSAN-FANUC i series

AXES CONTROL

Controlled axes	3 (X,Y,Z
Simultaneously controllable as	
Official County Controllable as	Positioning (G00) / Linear interpolation (G01) : 3 axes
	Circular interpolation (GO2, GO3) : 2 axes
Deeldesh samesastica	Gircular interpolation (GOZ, GO3) : 2 axes
Backlash compensation	
Follow up	
Least command increment	0.001mm (0.0001 inch)
Least input increment	0.001mm (0.0001 inch)
Machine lock	all axes / Z axis
Mirror image Re	verse axis movement (setting screen and M - function)
Stored pitch error compensati	
Stored stroke check 1	Overtraval controlled by software
- Absolute pulse coder	
7 accide pales seasi	
NTERPOLATION & FEED FUN	ICTION
	G30
2nd reference point return	
Circular interpolation	G02, G03
Cylinderical interpolation	G07.1
Dwell	G04
Exact stop check	G09, G61 (mode
Feed per minute	
Feedrate override (10% increi	ments) 0 - 200 %
Helical interpolation	
Jog override (10% increments	s) 0 - 200 %
Linear interpolation	G0 ⁻
Manual handle	1 unit
Manual handle feedrate	x1, x10, x100 (per pulse
Override cancel	M48 / M48
Positioning	GOO
Rapid traverse override	F0 (fine feed), 25 / 50 / 100 %
Deference point return	
Reference point return	G27, G28, G29
Skip function	
Skip function	G31
Skip function SPINDLE & M-CODE FUNCTIO	G3:
Skip function SPINDLE & M-CODE FUNCTIO M-code function	G3:
Skip function SPINDLE & M-CODE FUNCTIO M- code function Spindle orientation	G3:
Skip function SPINDLE & M-CODE FUNCTIO M-code function	G3:
Skip function SPINDLE & M-CODE FUNCTIO M-code function Spindle orientation Spindle serial output	G3: N M 3 digit
Skip function SPINDLE & M-CODE FUNCTIO M-code function Spindle orientation Spindle serial output Spindle speed command	G3' N M 3 digit
Skip function SPINDLE & M-CODE FUNCTIO M-code function Spindle orientation Spindle serial output	G3' N M 3 digit
Skip function SPINDLE & M-CODE FUNCTIO M-code function Spindle orientation Spindle serial output Spindle speed command Spindle speed override (10%	G3' N M 3 digit
Skip function SPINDLE & M-CODE FUNCTIO M- code function Spindle orientation Spindle spend output Spindle speed command Spindle speed override (10% FOOL FUNCTION	G3 N
Skip function SPINDLE & M-CODE FUNCTIO M-code function Spindle orientation Spindle serial output Spindle speed command Spindle speed override (10% FOOL FUNCTION Cutter compensation C	G3* N M 3 digit S5 digit 10 - 150 9 G40, G41, G41
Skip function SPINDLE & M-CODE FUNCTIO M- code function Spindle orientation Spindle speed command Spindle speed command Spindle speed override (10% FOOL FUNCTION Cutter compensation C Number of tool offsets	G3' N M 3 digit S5 digit increments) 10 - 150 % G40, G41, G4' 400 e4
Skip function SPINDLE & M-CODE FUNCTIO M- code function Spindle orientation Spindle speed command Spindle speed command Spindle speed override (10% FOOL FUNCTION Cutter compensation C Number of tool offsets Tool length compensation	G3 N M 3 digit S5 digit increments) 10 - 150 9 G40, G41, G44 400 ei G43, G44, G45
Skip function SPINDLE & M-CODE FUNCTIO M-code function Spindle orientation Spindle serial output Spindle speed command Spindle speed override (10% FOOL FUNCTION Cutter compensation C Number of tool offsets Tool length compensation Tool lift management	G3 N M 3 digit S5 digit 10 - 150 9 G40, G41, G4; 400 e G43, G44, G44 128 set
Skip function SPINDLE & M-CODE FUNCTIO M- code function Spindle orientation Spindle speed command Spindle speed command Spindle speed override (10% FOOL FUNCTION Coutter compensation C Number of tool offsets Tool length compensation Tool if management Tool inumber command	G3 N M 3 digit S5 digit increments) 10 - 150 % G40, G41, G44 400 e G43, G44, G44 128 set T2 digit
Skip function SPINDLE & M-CODE FUNCTIO M- code function Spindle orientation Spindle speed command Spindle speed command Spindle speed override (10% FOOL FUNCTION Cutter compensation C Number of tool offsets Tool length compensation Tool iffe management Tool offset memory C	G3 N M 3 digit S5 digit increments) 10 - 150 9 G40, G41, G44 400 et G43, G44, G49 128 set 12 digit Geometry / Wear and Length / Radius offset memor
Skip function SPINDLE & M-CODE FUNCTIO M- code function Spindle orientation Spindle speed command Spindle speed command Spindle speed override (10% FOOL FUNCTION Coutter compensation C Number of tool offsets Tool length compensation Tool if management Tool inumber command	G3 N M 3 digit S5 digit increments) 10 - 150 9 G40, G41, G44 400 et G43, G44, G49 128 set 12 digit Geometry / Wear and Length / Radius offset memor
Skip function SPINDLE & M-CODE FUNCTIO M- code function Spindle orientation Spindle speed command Spindle speed command Spindle speed command Spindle speed override (10% FOOL FUNCTION Coutter compensation C Number of tool offsets Tool length compensation Tool offset management Tool offset memory C Tool position offset	G3 N M 3 digits S5 digits S5 digits S5 digits S6 dig
Skip function SPINDLE & M-CODE FUNCTIO M- code function Spindle orientation Spindle speed command Spindle speed command Spindle speed override (10% FOOL FUNCTION Cutter compensation C Number of tool offsets Tool length compensation Tool iffe management Tool offset memory C	G3 N M 3 digits S5 digits S5 digits S5 digits S6 dig
Skip function SPINDLE & M-CODE FUNCTIO M- code function Spindle orientation Spindle speed output Spindle speed command Spindle speed override (10% FOOL FUNCTION Cutter compensation C Number of tool offsets Tool length compensation Tool life management Tool offset memory C Tool position offset PROGRAMMING & EDITING FU	G3 N M 3 digit S5 digit 10 - 150 9 G40, G41, G44 400 e G43, G44, G44 128 set T2 digit Geometry / Wear and Length / Radius offset memor G45 - G44 NCTION
Skip function SPINDLE & M-CODE FUNCTIO M- code function Spindle orientation Spindle serial output Spindle speed command Spindle speed override (10% FOOL FUNCTION Cutter compensation C Number of tool offsets Tool lingth compensation Tool life management Tool offset memory C Tool position offset PROGRAMMING & EDITING FU Absolute / Incremental progra	S3 digit S5 digit
Skip function SPINDLE & M-CODE FUNCTIO M- code function Spindle orientation Spindle speed command Spindle speed command Spindle speed command Spindle speed override (10% FOOL FUNCTION Coutter compensation C Number of tool offsets Tool length compensation Tool offset management Tool offset memory C Tool position offset Absolute / Incremental progra Automatic Coordinate system	S3 digit S5 digit
Skip function SPINDLE & M-CODE FUNCTIO M- code function Spindle orientation Spindle orientation Spindle speed command Spindle speed override (10% FOOL FUNCTION Cutter compensation C Sumber of tool offsets Tool length compensation Tool life management Tool offset memory C Tool position offset PROGRAMMING & EDITING FU Absolute / Incremental progra Automatic Coordinate system Background editing	S3 digit
Skip function SPINDLE & M-CODE FUNCTIO M- code function Spindle orientation Spindle speed command Spindle speed command Spindle speed override (10% FOOL FUNCTION Cutter compensation C Number of tool offsets Tool length compensation Tool life management Tool inumber command Tool offset memory C Tool position offset PROGRAMMING & EDITING FU Absolute / Incremental progra Automatic Coordinate system Background editing Canned cycle	S3 digit
Skip function SPINDLE & M-CODE FUNCTIO M- code function Spindle orientation Spindle speed command Spindle speed command Spindle speed command Spindle speed override (10% FUNCTION Coulter compensation C Number of tool offsets Tool length compensation Tool offset management Tool offset memory C Tool position offset Absolute / Incremental progra Automatic Coordinate system Background editing Canned cycle Circular interpolation by radiu	S3 digit
Skip function SPINDLE & M-CODE FUNCTIO M- code function Spindle orientation Spindle orientation Spindle speed command Spindle speed command Spindle speed override (10% FOOL FUNCTION Cutter compensation C Number of tool offsets Tool length compensation Tool life management Tool ourber command Tool offset memory C Tool position offset PROGRAMMING & EDITING FU Absolute / Incremental progra Automatic Coordinate system Background editing Canned cycle Circular interpolation by radiu Custom macro B	S3 digit
Skip function SPINDLE & M-CODE FUNCTIO M- code function Spindle orientation Spindle speed command Spindle speed command Spindle speed command Spindle speed override (10% FOOL FUNCTION Cutter compensation C Number of tool offsets Tool length compensation Tool life management Tool inder memory C Tool position offset PROGRAMMING & EDITING FU Absolute / Incremental progra Automatic Coordinate system Background editing Canned cycle Circular interpolation by radiu Custom macro B Decimal point input	N
Skip function SPINDLE & M-CODE FUNCTIO M- code function Spindle orientation Spindle speed command Spindle speed command Spindle speed command Spindle speed command Spindle speed override (10% FUNCTION Coutter compensation C Number of tool offsets Tool length compensation Tool offset management Tool offset memory C Tool position offset Absolute / Incremental progra Automatic Coordinate system Background editing Canned cycle Circular interpolation by radiu Custom macro B Decimal point input Extended part program editing	S3 M M 3 digit
Skip function SPINDLE & M-CODE FUNCTIO M- code function Spindle orientation Spindle speed command Spindle speed command Spindle speed command Spindle speed override (10% FOOL FUNCTION Cutter compensation C Number of tool offsets Tool length compensation Tool life management Tool inder memory C Tool position offset PROGRAMMING & EDITING FU Absolute / Incremental progra Automatic Coordinate system Background editing Canned cycle Circular interpolation by radiu Custom macro B Decimal point input	S3 M M 3 digits
Skip function SPINDLE & M-CODE FUNCTIO M- code function Spindle orientation Spindle speed command Spindle speed command Spindle speed command Spindle speed command Spindle speed override (10% FUNCTION Coutter compensation C Number of tool offsets Tool length compensation Tool offset management Tool offset memory C Tool position offset Absolute / Incremental progra Automatic Coordinate system Background editing Canned cycle Circular interpolation by radiu Custom macro B Decimal point input Extended part program editing	N M 3 digits S5 digits S5 digits S5 digits S6 digits

	050 1050
- Local / Machine coordinate system	G52 / G53
- Maximum commandable value	±99,999.999 mm (±9,999.9999 inch)
- No. of Registered programs	400 ea
- Optional block skip	
- Optional stop	M01
- Part program storage	640m (2,100 ft) [256 kB]
- Program number	04-digits
- Program protect	
- Program stop / end	M00 / M02,M30
- Rigid tapping	G84, G74
- Sub program	Up to 4 nesting
- Tape code	ISO / EIA Automatic discrimination
- Thread cutting	
- Work coordinate system	G54 - G59
OTHERS FUNCTIONS (Operation, setting & - 3rd / 4th reference return	& Display, etc)
- Additional work coordinate system	G54.1 P1 - 48 (48 pairs)
Al APC(Advanced Preview Control)	20 block preview
- Alarm display	20 block proviow
- Alarm history display	
Automatic corner override	G62
- Clock function	002
	000 000
- Coordinate rotation	G68,G69
- Cycle start / Feed hold	
- Control axis detach	
	Message display when PMC alarm occurred
- Dry run	
	-
- Graphic display	Tool path drawing
- Graphic display - Help function	Tool path drawing
- Graphic display - Help function - High speed skip function	Tool path drawing
- Graphic display - Help function - High speed skip function - Loadmeter display	Tool path drawing
Graphic display Help function High speed skip function Loadmeter display Look ahead control	G08
Graphic display Help function High speed skip function Loadmeter display Look ahead control	
Graphic display Help function High speed skip function Loadmeter display Look ahead control	G08
- Graphic display - Help function - High speed skip function - Loadmeter display - Look ahead control - MDI / DISPLAY unit 8.4" Color TFT LCI	G08
- Graphic display - Help function - High speed skip function - Loadmeter display - Look ahead control - MDI / DISPLAY unit 8.4" Color TFT LCC - Memory card interface	G08 O, keyboard for data input (small), soft-keys
- Graphic display - Help function - High speed skip function - Loadmeter display - Look ahead control - MDI / DISPLAY unit 8.4" Color TFT LCI - Memory card interface - Operation functions - Operation history display	G08 O, keyboard for data input (small), soft-keys
- Graphic display - Help function - High speed skip function - Loadmeter display - Look ahead control - MDI / IDSPLAY unit 8.4" Color TFT LCI - Memory card interface - Operation functions - Operation history display - Optional angle chamfering / corner R	G08 O, keyboard for data input (small), soft-keys
- Graphic display - Help function - High speed skip function - Loadmeter display - Look ahead control - MDI / DISPLAY unit 8.4" Color TFT LCC - Memory card interface - Operation functions - Operation history display - Optional angle chamfering / corner R - Polar coordinate command	G08 D, keyboard for data input (small), soft-keys Tape / Memory / MDI / Manual
- Graphic display - Help function - High speed skip function - Loadmeter display - Look ahead control - MDI / DISPLAY unit 8.4" Color TFT LCC - Memory card interface - Operation functions - Operation history display - Optional angle chamfering / corner R - Polar coordinate command - Program restart	G08 O, keyboard for data input (small), soft-keys Tape / Memory / MDI / Manual G15 / G16
- Graphic display - Help function - High speed skip function - Loadmeter display - Look ahead control - MDI / IDSPLAY unit - Memory card interface - Operation functions - Polar coordinate command - Program restart - Programmable data input - Tool offse	G08 D, keyboard for data input (small), soft-keys Tape / Memory / MDI / Manual G15 / G16 et and work offset are entered by G10, G11
- Graphic display - Help function - Ligh speed skip function - Loadmeter display - Look ahead control - MDI / DISPLAY unit 8.4" Color TFT LCC - Memory card interface - Operation functions - Operation history display - Optional angle chamfering / corner R - Polar coordinate command - Program restart - Programmable data input Tool offse - Programmable mirror image	G08 O, keyboard for data input (small), soft-keys Tape / Memory / MDI / Manual G15 / G16
- Graphic display - Help function - High speed skip function - Loadmeter display - Look ahead control - MbI / IDSPLAY unit 8.4" Color TFT LCC - Memory card interface - Operation functions - Operation history display - Optional angle chamfering / corner R - Polar coordinate command - Program restart - Programmable data input Tool offse - Programmable mirror image - Run hour and part number display	G08), keyboard for data input (small), soft-keys Tape / Memory / MDI / Manual G15 / G16 et and work offset are entered by G10, G11 G50.1 / G51.1
- Graphic display - Help function - High speed skip function - Loadmeter display - Look ahead control - MDI / IDSPLAY unit - MENORY CONTROL - MORE CONTROL -	G08 D, keyboard for data input (small), soft-keys Tape / Memory / MDI / Manual G15 / G16 et and work offset are entered by G10, G11 G50.1 / G51.1 G50, G51
- Graphic display - Help function - Loadmeter display - Look ahead control - MDI / DISPLAY unit 8.4" Color TFT LCC - Memory card interface - Operation functions - Operation functions - Operation history display - Optional angle chamfering / corner R - Polar coordinate command - Program restart - Programmable data input Tool offse - Programmable mirror image - Run hour and part number display - Scaling - Search function	G08), keyboard for data input (small), soft-keys Tape / Memory / MDI / Manual G15 / G16 et and work offset are entered by G10, G11 G50.1 / G51.1
- Graphic display - Help function - High speed skip function - Loadmeter display - Look ahead control - Look ahead control - Mbl / DISPLAY unit 8.4" Color TFT LCC - Memony card interface - Operation functions - Operation history display - Optional angle chamfering / corner R - Polar coordinate command - Programmable data input - Programmable data input - Programmable mirror image - Run hour and part number display - Scaling - Search function - Self - diagnostic function	G08 D, keyboard for data input (small), soft-keys Tape / Memory / MDI / Manual G15 / G16 et and work offset are entered by G10, G11 G50.1 / G51.1 G50, G51
- Graphic display - Help function - Holp function - Loadmeter display - Look ahead control - MDI / ISIP-LAY unit 8.4" Color TFT LCC - Memory card interface - Operation functions - Polar coordinate command - Program restart - Programmable data input - Programmable mirror image - Run hour and part number display - Sealing - Search function - Setf - diagnostic function - Servo setting screen	G08 D, keyboard for data input (small), soft-keys Tape / Memory / MDI / Manual G15 / G16 et and work offset are entered by G10, G11 G50.1 / G51.1 G50, G51
- Graphic display - Help function - High speed skip function - Loadmeter display - Look ahead control - MDI / DISPLAY unit 8.4" Color TFT LCC - Memory card interface - Operation functions - Operation functions - Operation history display - Optional angle chamfering / corner R - Polar coordinate command - Program restart - Programmable data input Tool offse - Programmable mirror image - Run hour and part number display - Sealing - Search function - Self - diagnostic function - Servo setting screen - Single block	G08 O, keyboard for data input (small), soft-keys Tape / Memory / MDI / Manual G15 / G16 et and work offset are entered by G10, G11 G50.1 / G51.1 G50, G51 Sequence N0. / Program N0.
- Graphic display - Help function - High speed skip function - Loadmeter display - Look ahead control - MDI / IDSPLAY unit 8.4" Color TFT LCC - Memory card interface - Operation history display - Optional angle chamfering / corner R - Polar coordinate command - Program restart - Programmable data input Tool offse - Programmable mirror image - Run hour and part number display - Sealing - Search function - Servo setting screen - Single block - Single direction positioning	G08 D, keyboard for data input (small), soft-keys Tape / Memory / MDI / Manual G15 / G16 et and work offset are entered by G10, G11 G50.1 / G51.1 G50, G51
- Graphic display - Help function - High speed skip function - Loadmeter display - Look ahead control - MDI / DISPLAY unit 8.4" Color TFT LCC - Memory card interface - Operation functions - Operation functions - Operation history display - Optional angle chamfering / corner R - Polar coordinate command - Program restart - Programmable data input Tool offse - Programmable mirror image - Run hour and part number display - Sealing - Search function - Self - diagnostic function - Servo setting screen - Single block	G08 O, keyboard for data input (small), soft-keys Tape / Memory / MDI / Manual G15 / G16 et and work offset are entered by G10, G11 G50.1 / G51.1 G50, G51 Sequence N0. / Program N0.
- Graphic display - Help function - High speed skip function - Loadmeter display - Look ahead control - MDI / IDSPLAY unit 8.4" Color TFT LCC - Memory card interface - Operation history display - Optional angle chamfering / corner R - Polar coordinate command - Program restart - Programmable data input Tool offse - Programmable mirror image - Run hour and part number display - Sealing - Search function - Servo setting screen - Single block - Single direction positioning	G08 O, keyboard for data input (small), soft-keys Tape / Memory / MDI / Manual G15 / G16 et and work offset are entered by G10, G11 G50.1 / G51.1 G50, G51 Sequence N0. / Program N0.
- Graphic display - Help function - Help function - High speed skip function - Loadmeter display - Look ahead control - MDI / IDSPLAY unit 8.4" Color TFT LCC - Memory card interface - Operation functions - Operation history display - Optional angle chamfering / corner R - Polar coordinate command - Program restart - Programmable data input Tool offse - Programmable mirror image - Run hour and part number display - Sealing - Search function - Search search function - Search	G08 0, keyboard for data input (small), soft-keys Tape / Memory / MDI / Manual G15 / G16 et and work offset are entered by G10, G11 G50.1 / G51.1 G50, G51 Sequence N0. / Program N0. G60
- Graphic display - Help function - High speed skip function - Loadmeter display - Look ahead control - MDI / ISPLAY unit 8.4" Color TFT LCI - Memory card interface - Operation functions - Operation instory display - Optional angle chamfering / corner R - Polar coordinate command - Program restart - Programmable mirror image - Run hour and part number display - Scaling - Search function - Servo setting screen - Single block - Single block - Single direction positioning - Stored stroke check 2 OPTIONAL SPECIFICATIONS - Additional controlled axes	G08 D, keyboard for data input (small), soft-keys Tape / Memory / MDI / Manual G15 / G16 et and work offset are entered by G10, G11 G50.1 / G51.1 G50, G51 Sequence NO. / Program NO. G60 4 axes in total
- Graphic display - Help function - Holp function - Loadmeter display - Look ahead control - Mol / Olsp/LAV unit 8.4" Color TFT LCC - Memory card interface - Operation functions - Operation history display - Optional angle chamfering / corner R - Polar coordinate command - Program restart - Programmable data input Tool offse - Programmable mirror image - Run hour and part number display - Sealing - Search function - Seal' - diagnostic function - Serior - diagnostic function - Serior - Setting screen - Single block - Single direction positioning - Stored stroke check 2 - OPTIONAL SPECIFICATIONS - Additional controlled axes - AICC (AI Contour Control) with Hardware	G08 0, keyboard for data input (small), soft-keys Tape / Memory / MDI / Manual G15 / G16 et and work offset are entered by G10, G11 G50.1 / G51.1 G50, G51 Sequence N0. / Program N0. G60
- Graphic display - Help function - Help function - High speed skip function - Loadmeter display - Look ahead control - MDI / IDSPLAY unit 8.4" Color TFT LCC - Memory card interface - Operation functions - Operation history display - Optional angle chamfering / corner R - Polar coordinate command - Program restart - Programmable informinge - Run hour and part number display - Sealing - Search function - Serior diagnostic function - Serior setting screen - Single block - Single direction positioning - Stored stroke check 2 OPTIONAL SPECIFICATIONS - Additional controlled axes - AICC (AI Contour Control) with Hardware - Data server	G08 0, keyboard for data input (small), soft-keys Tape / Memory / MDI / Manual G15 / G16 et and work offset are entered by G10, G11 G50.1 / G51.1 G50, G51 Sequence N0. / Program N0. G60 4 axes in total 40 block preview
- Graphic display - Help function - Holp function - Loadmeter display - Look ahead control - Mol / Olsp/LAV unit 8.4" Color TFT LCC - Memory card interface - Operation functions - Operation history display - Optional angle chamfering / corner R - Polar coordinate command - Program restart - Programmable data input Tool offse - Programmable mirror image - Run hour and part number display - Sealing - Search function - Seal' - diagnostic function - Serior - diagnostic function - Serior - Setting screen - Single block - Single direction positioning - Stored stroke check 2 - OPTIONAL SPECIFICATIONS - Additional controlled axes - AICC (AI Contour Control) with Hardware	G08 0, keyboard for data input (small), soft-keys Tape / Memory / MDI / Manual G15 / G16 et and work offset are entered by G10, G11 G50.1 / G51.1 G50, G51 Sequence N0. / Program N0. G60 4 axes in total 40 block preview

- EZ Guide i (Doosan Conversational Programming Solution)

with 10.4" Color TFT LCD

- Tool load monitoring function(doosan)

FANUC 32i-A

AXES CONTROL	
- Controlled axes 3 (X, Y, Z)	- Part program storage 640m (2,100ft) [256kB]m
 Simultaneously controllable axes Positioning(G00)/Linear interpolation(G01): 3 axes 	- Program number 04-digits
Circular interpolation(G02, G03) : 2 axes	- Program protect
- Backlash compensation	- Program stop / end M00 / M02,M30
- Emergency stop / overtravel	- Programmable data input Tool offset and work offset are entered by G10, G11 - Sub program Up to 4 nesting
- Follow up - Least command increment 0.001mm (0.0001 inch)	- Sub program Up to 4 nesting - Tape code ISO / EIA Automatic discrimination
- Least input increment 0.001mm (0.0001 inch)	- Tape code 150 / Eta Automatic discrimination - Work coordinate system G54 - G59
- Machine lock All axes / Z axis	- Additional work coordinate system (48 Pair) G54.1 P1 - 48 pairs
- Mirror image Reverse axis movement (Setting screen and M - function)	- Coordinate system rotation G68, G69
- Stored pitch error compensation Pitch error offset compensation for each axis	- Extended part program editing
- Stored stroke check 1 Overtravel controlled by software	- Optional angle chamfering / corner R
- Absolute pulse coder	- Macro executor
INTERPOLATION & FEED FUNCTION	OTHERS FUNCTIONS (Operation, Setting & Display, etc)
- 2nd reference point return G30	- Alarm display
- Circular interpolation G02, G03	- Alarm history display
- Dwell G04	- Clock function
- Exact stop check G09, G61(mode)	- Cycle start / Feed hold
- Feed per minute - Feedrate override (10% increments) 0 - 200 %	Control axis detach Display of PMC alarm message
- Jog override (10% increments) 0 - 200 %	- Dry run
- Linear interpolation G01	- Ethernet function(Embeded)
- Manual handle feed 1 unit	- Graphic display Tool path drawing
- Manual handle feedrate x1, x10, x100(per pulse)	- Help function
- Override cancel M48 / M49	- Loadmeter display
- Positioning G00	 MDI / DISPLAY unit 10.4" Color TFT LCD, Keyboard for data input, soft-keys
- Rapid traverse override F0 (fine feed), 25 / 50 / 100 %	- Memory card interface
- Reference point return G27, G28, G29	- Operation functions Tape / Memory / MDI / Manual
- Skip function G31	- Operation history display
- Helical interpolation	- Program restart
- DSQ1(AICC II + Machine condition selection function) 80 block preview	- Run hour and part number display - Search function Sequence NO. / Program NO.
- Thread cutting, synchronous cutting - Program restart	- Search function Sequence NO. / Program NO Self - diagnostic function
- Frogram residit - Automatic corner deceleration (Specify Al Contour control II)	- Servo setting screen
- Automatic corner deceleration (Specify Al Contour control II) - Feedrate clamp by circular acceleration (Specify Al Contour control II)	- Single block
- Linear ACC/DEC before interpolation (Specify Al Contour control II)	- External data input
- Linear ACC/DEC after interpolation	- Multi language display
Decid to come hall about a content to (decade attention)	
Rapid traverse bell-shaped acceleration/deceleration	- Stored stroke check 2
- Rapid traverse bell-snaped acceleration/deceleration - Smooth backlash compensation	- Stored stroke check 2
- Smooth backlash compensation	- Stored stroke check 2
- Smooth backlash compensation SPINDLE & M-CODE FUNCTION	- Stored stroke check 2 OPTIONAL SPECIFICATIONS - 3-dimensional coordinate conversion
- Smooth backlash compensation SPINDLE & M-CODE FUNCTION - M-code function M3 digits	- Stored stroke check 2 OPTIONAL SPECIFICATIONS - 3-dimensional coordinate conversion - 3-dimensional tool compensation
- Smooth backlash compensation SPINDLE & M-CODE FUNCTION - M code function M3 digits - Spindle orientation M	- Stored stroke check 2 OPTIONAL SPECIFICATIONS - 3-dimensional coordinate conversion - 3-dimensional to compensation - 3-di / Hit reference return
- Smooth backlash compensation SPINDLE & M-CODE FUNCTION - M-code function - Spindle orientation - Spindle orientation - Spindle spinal urbut	- Stored stroke check 2 OPTIONAL SPECIFICATIONS - 3-dimensional coordinate conversion - 3-dimensional tool compensation - 3rd / 4th reference return - Addition of too plairs for tool life management 1024 pairs
- Smooth backlash compensation SPINDLE & M-CODE FUNCTION - M- code function - M3 digits - Spindle orientation - Spindle serial output - Spindle speed command S5 digits	- Stored stroke check 2 OPTIONAL SPECIFICATIONS - 3-dimensional coordinate conversion - 3-dimensional tool compensation - 3rd / 4th reference return - Addition of tool pairs for tool life management - Addition controlled aves Max. 5 axes in total
- Smooth backlash compensation SPINDLE & M-CODE FUNCTION - M- code function M3 digits - Spindle orientation - Spindle serial output - Spindle speed command - Spindle speed command - Spindle speed command - Spindle speed vermide (10% increments) 10 - 150 %	- Stored stroke check 2 OPTIONAL SPECIFICATIONS - 3-dimensional coordinate conversion - 3-dimensional tool compensation - 3rd / 4th reference return - Addition of too plairs for tool life management 1024 pairs
- Smooth backlash compensation SPINDLE & M-CODE FUNCTION - M- code function - Spindle orientation - Spindle serial output - Spindle speed command - Spindle speed command - Spindle speed command - Spindle speed oweride (10% increments) - Spindle output switching - Retraction for rigid tapping	- Stored stroke check 2 OPTIONAL SPECIFICATIONS - 3-dimensional coordinate conversion - 3-dimensional tool compensation - 3-dr / 4th reference return - Addition of too plars for tool life management - Additional controlled axes - Additional controlled axes - Additional work coordinate system - 654.1 Pt - 300 (300 pairs)
- Smooth backlash compensation SPINDLE & M-CODE FUNCTION -M-code function -Spinde oreination -Spinde serial output -Spinde spend ownered Spinde spend of Spinde spend ownered (10% increments) -Spinde spend ownered (10% increments) -Spinde output switching 10 - 150 %	- Stored stroke check 2 OPTIONAL SPECIFICATIONS - 3-dimensional tool compensation - 3-dimensional tool compensation - 3-dry 4th reference return - Addition of tool pairs for tool life management - Additional controlled axes - Additional controlled axes - Additional controlled axes - Max. 5 axes in total - Additional work coordinate system - Additional work coordinate system - SS 0 - Store St
- Smooth backlash compensation SPINDLE & M-CODE FUNCTION - M- code function - Spindle orientation - Spindle spiral output - Spindle speed command S digits - Spindle speed command - Rigid tapping G84, G74	- Stored stroke check 2 OPTIONAL SPECIFICATIONS - 3-dimensional coordinate conversion - 3-dimensional coordinate conversion - 3-dimensional tool compensation - 3rd / 4th reference return - Addition of tool pairs for tool life management - Additional controlled axes - Additional vork coordinate system - Additional vork coordinate system - SDS 2 - SDS 2 - SDS 2 - Additional conversion - SDS 3 - SDS 3 - Additional conversion - SDS 3 - SDS 4 - Additional conversion - SDS 4 - Additional conversion - SDS 5 - SDS 6 - Additional conversion - SDS 7 - Additional conversion - S
- Smooth backlash compensation SPINDLE & M-CODE FUNCTION - M- code function - Spindle orientation - Spindle serial output - Spindle serial output - Spindle speed command - Replace to the spindle speed command - Replace to the spindle speed command - Replace to the spindle spi	- Stored stroke check 2 OPTIONAL SPECIFICATIONS - 3-dimensional coordinate conversion - 3-dimensional tool compensation - 3rd 7 4th reference return - Addition of too plars for tool life management - Additional controlled axes - Additional controlled axes - Additional work coordinate system - GS4.1 P1 - 300 (300 pairs) - DS0 2 - ROCC II + Machine condition selection function + Data server + 1GB) - Automatic corner override - Chopping function - G81.1 - Cilinfrical interpolation - G97.1
- Smooth backlash compensation SPRINLE & M-CODE FUNCTION - M- code function - M3 digits - Spindle orientation - Spindle serial output - Spindle speed command - Spindle speed command - Spindle speed command - Spindle speed commind - Rigid tapping - Rigid tapping - Rigid tapping - Rigid tapping - Tool rigid tapping - Tool rigid tapping - Tool rigid tapping - Rigid tapping	- Stored stroke check 2 OPTIONAL SPECIFICATIONS - 3-dimensional coordinate conversion - 3-dimensional coordinate conversion - 3-did - 1
- Smooth backlash compensation SPINDLE & M-CODE FUNCTION - M- code function - Spindle orientation - Spindle serial output - Spindle speed command - Replace of the spindle spind	- Stored stroke check 2 OPTIONAL SPECIFICATIONS - 3-dimensional coordinate conversion - 3-dimensional tool compensation - 3-3rd 4th reference return - Addition of tool pairs for tool life management - Additional controlled axes - Additional controlled axes - Additional work coordinate system - G54.1 P1 - 300 (300 pairs) - D50 2 - 80 block preview - Automatic corner override - Chopping function - Cylimforal interpolation - Cylimforal interpolation - Dymamic graphic display - Exponential interpolation - Exponential interpolation
- Smooth backlash compensation SPRINLE & M-CODE FUNCTION - M- code function - M3 digits - Spindle orientation - Spindle speed command - Rigid tapping - Rigid tapping - Rigid tapping - Rigid tapping - Tool reptor spied spied - Number of tool offsets - Spindle spied compensation - Tool reptor spied spied - S	- Stored stroke check 2 OPTIONAL SPECIFICATIONS - 3-dimensional coordinate conversion - 3-dimensional coordinate conversion - 3-did - Althorise compensation - 3-did - Althorise conversion - 3-dimensional tool compensation - Additional controlled axes - Additional controlled axes - Additional vork coordinate system - Additional vork coordinate system - SSQ 2 - 80 block preview - Althorise conversional formation selection function + Data server + 168) - Automatic corner override - Automatic corner override - Automatic corner override - Chopping function - G81.1 - Cylindrical interpolation - Dynamic graphic display - Exponential interpolation - Exponential interpolation - Interpolation type pitch error compensation
- Smooth backlash compensation SPINDLE & M-CODE FUNCTION - M- code function	- Stored stroke check 2 OPTIONAL SPECIFICATIONS - 3-dimensional coordinate conversion - 3-dimensional tool compensation - 3-drivensional tool compensation - 3-drivensional tool compensation - 3-drivensional tool compensation - 3-drivensional tool pairs for tool life management - Additional controlled axes - Additional controlled axes - Additional work coordinate system - G54. P1 - 300 (300 pairs) - DS0 2 - 80 block preview (AIDC II + Machine condition selection function + Data server + 1GB) - Automatic corner override - Automatic corner override - Chopping function - Chindrical Interpolation - Cylindrical Interpolation - Dynamic graphic display - Exponential interpolation - Interpolation type pitch error compensation - Let Guide I (Doosan Infraore Conversational Programming Solution) with 10.4" Color IFT
- Smooth backlash compensation SPINDLE & M-CODE FUNCTION - M- code function - M3 digits - Spindle oreination - Spindle speed command - Representation for rigid tapping - Retraction for rigid tapping - Rigid tapping - Route FUNCTION - Tool nose radius compensation - Tool nose radius compensation - Tool longer form for the speed of the spe	- Stored stroke check 2 OPTIONAL SPECIFICATIONS - 3-dimensional coordinate conversion - 3-dimensional tool compensation - 3rd 7 4th reference return - Addition of too plars for tool life management - Additional controlled axes - Additional work coordinate system - GS4.1 P1 - 300 (300 pairs) - DS0.2 80 block preview (AICC II + Machine condition selection function + Data server + 1GB) - Automatic corner override - Chopping function - Cylindrical interpolation - GS7.1 - Dynamic graphic display - Exponential interpolation - Interpolation type pitch error compensation - LZ Guide it (Doosan infracore Conversational Programming Solution) with 10.4" Color TFT - S When the LZ Guide it (sued, the Dynamic graphic display cannot application
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